

Patent  
Attorney's Docket No. 004501-545

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of )  
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MARTIN LAKNER, et al. ) Group Art Unit: Unassigned  
 )  
Application No.: Unassigned ) Examiner: Unassigned  
 )  
Filed: April 25, 2001 )  
 )  
For: HIGH-VOLTAGE INSULATION )  
 SYSTEM )

**PRELIMINARY AMENDMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to examination of the above-captioned patent application, it is requested that the following amendments be entered.

**IN THE CLAIMS:**

Please replace Claims 1-10 as follows.

1. (Amended) A high-voltage insulation system for electrical insulation of components whose operating temperature is below ambient temperature comprising a coolant and a solid material having a cured polymer matrix and a base fabric, wherein the base fabric comprises cellulose.

2. (Amended) The high-voltage insulation system as claimed in claim 1, wherein the coolant comprises liquid nitrogen and the components contain high-temperature superconductor material.

3. (Amended) The high-voltage insulation system as claimed in claim 1, wherein, in order to make the components mechanically robust, the base fabric is in the form of pressboards.

4. (Amended) The high-voltage insulation system as claimed in claim 3, wherein the base fabric comprises a laminate having at least two layers of pressboards, which are separated by at least one intermediate layer.

5. (Amended) The high-voltage insulation system as claimed in claim 4, wherein the intermediate layer comprises a fabric composed of cotton, nylon or polyethylene fibers.

6. (Amended) The high-voltage insulation system as claimed in claim 1, wherein, in order to grade electrical fields, carbon in the form of fibers or fabrics is added to the base fabric or to the intermediate layer.

7. (Amended) The high-voltage insulation system as claimed in claim 1, wherein, for mechanical reinforcement glass fibers in the form of fibers or fabrics are added to the base fabric or to the intermediate layer.

8. (Amended) A method for producing a high-voltage insulation system comprising a coolant and a solid material having a cured polymer matrix and a base fabric, wherein a base fabric comprising cellulose is formed in the dry state as a pressboard and is then impregnated with a polymer resin.

9. (Amended) The method as claimed in claim 8, wherein the pressboard has a thickness d, and a minimum radius of curvature R, and in that the ratio R/d is less than 150.

10. (Amended) The method as claimed in claim 8, wherein the formed pressboard forms a coil former on which at least one winding of a superconducting conductor is wound, and the coil former and the winding are then impregnated jointly.

**REMARKS**

By way of the foregoing amendments to the claims, Claims 1-10 have been amended to delete the multiple dependencies and reference numerals. These changes have been made in accordance with 37 C.F.R. § 1.121 as amended on November 7, 2000. Marked-up versions of Claims 1-10 indicating the changes accompany this Preliminary Amendment.

Early and favorable consideration with respect to this application is respectfully requested.

Should any questions arise in connection with this application, the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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Date: April 25, 2001

**Attachment to Preliminary Amendment dated April 25, 2001**

**Marked-up Claims 1-10**

1. (Amended) A high-voltage insulation system for electrical insulation of components whose operating temperature is below ambient temperature comprising a coolant [(3)] and a solid material [(2)] having a cured polymer matrix [(21)] and a base fabric [(20)], [characterized in that] wherein the base fabric [(20)] comprises cellulose.
  
2. (Amended) The high-voltage insulation system as claimed in claim 1, [characterized in that] wherein the coolant [(3)] comprises liquid nitrogen and the components contain high-temperature superconductor material.
  
3. (Amended) The high-voltage insulation system as claimed in claim 1, [characterized in that] wherein, in order to make the components mechanically robust, the base fabric [(20)] is in the form of pressboards.
  
4. (Amended) The high-voltage insulation system as claimed in claim 3, [characterized in that] wherein the base fabric comprises a laminate [(6)] having at least two layers [(20, 61)] of pressboards, which are separated by at least one intermediate layer [(62)].
  
5. (Amended) The high-voltage insulation system as claimed in claim 4, [characterized in that] wherein the intermediate layer [(62)] comprises a fabric composed of cotton, nylon or polyethylene fibers.

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**Marked-up Claims 1-10**

6. (Amended) The high-voltage insulation system as claimed in claim 1 [or 4], [characterized in that] wherein, in order to grade electrical fields, carbon in the form of fibers or fabrics is added to the base fabric [(20)] or to the intermediate layer [(62)].

7. (Amended) The high-voltage insulation system as claimed in claim 1 [or 4], [characterized in that] wherein, for mechanical reinforcement glass fibers in the form of fibers or fabrics are added to the base fabric [(20)] or to the intermediate layer [(62)].

8. (Amended) A method for producing a high-voltage insulation system comprising a coolant [(3)] and a solid material [(2)] having a cured polymer matrix [(21)] and a base fabric [(20)],

[characterized in that] wherein a base fabric [(20)] comprising cellulose is formed in the dry state as a pressboard and is then impregnated with a polymer resin.

9. (Amended) The method as claimed in claim 8, [characterized in that] wherein the pressboard has a thickness d, and a minimum radius of curvature R, and in that the ratio R/d is less than 150.

10. (Amended) The method as claimed in claim 8, [characterized in that] wherein the formed pressboard forms a coil former [(6)] on which at least one winding of a

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**Marked-up Claims 1-10**

superconducting conductor [(1')] is wound, and the coil former [(6)] and the winding [(1')] are then impregnated jointly.